

48



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/020,605	12/11/2001	Bharadwaj S. Amrutur	10010107-1	6541

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AGILENT TECHNOLOGIES, INC.  
Legal Department, DL429  
Intellectual Property Administration  
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Loveland, CO 80537-0599

EXAMINER

TORRES, JOSEPH D

ART UNIT	PAPER NUMBER
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2133

DATE MAILED: 02/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/020,605	AMRUTUR ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Joseph D. Torres	2133	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 January 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10 and 34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 and 34 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 September 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Claim Objections***

1. In view of the Amendment filed 12/03/2004, the Examiner withdraws previous objections to the claims.

### ***Response to Arguments***

2. Applicant's arguments with respect to claims 1-10 and 34 have been considered but are moot in view of the new ground(s) of rejection. Note: Although the Examiner is using the same Prior Art as in the previous rejection, the Examiner has rewritten the objections to independent claims 1, 6 and 34 to explicitly address the Applicants arguments in the response filed 09/07/2004.

### ***Claim Rejections - 35 USC § 112***

3. Claims 1-10 and 34 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential elements, such omission amounting to a gap between the elements. Claims 1 and 34 recite, "A serial communications system", in the preamble. Claim 6 recites, "A serial communications method", in the preamble. See MPEP § 2172.01. The omitted elements are: elements relating the body of claims 1 and 34 to a serial communications system. The omitted elements are: elements relating the body of claim 6 to a serial communications method.

***Claim Rejections - 35 USC § 101***

4. Claims 1-10 and 34 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claims 1, 6 and 34 recite algorithmic function and means that can be carried out by hand or computer software. Algorithms and computer software are non-statutory.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1, 2, 5-8 and 34 are rejected under 35 U.S.C. 102(e) as being anticipated by Adam; Joel Fredric et al. (US 6628725 B1, hereafter referred to as Adam).

35 U.S.C. 102(e) rejection of claims 1, 5, 6 and 34.

Adam teaches a scrambler for converting original received data into scrambled data (D1, D2 and D3 in step 302 of Figure 3 of Adam are **original** received data in Data Stream 102; col. 4, lines 51-59 in Adam teach that **original** received data D1, D2 and D3 in Step 304 of Figure 3 are received by the scrambler which outputs SD1, SD2 and SD3 in Step 306; Adam explicitly teaches that SD1, SD2 and SD3 in Step 306 are

Art Unit: 2133

scrambled versions of original received data D1, D2 and D3 in Step 304 of Figure 3;

*Note: Adam does not teach any intermediary steps between step 304 and step 306 that alter original received data D1, D2 and D3 prior to scrambling original received data D1, D2 and D3); and an ECC encoder for converting said scrambled data into ECC-encoded data (scrambled original received data SD1, SD2 and SD3 are FEC encoded to convert original received data SD1, SD2 & SD3, scramble encoded control bits SK1', SK2' & SK3' and synchronization bits SS into ECC-encoded data).*

35 U.S.C. 102(e) rejection of claims 2, 7 and 8.

Adam teaches Serializer 108 in Figure 1 of Adams for converting said ECC-encoded data from FEC Encoder 106 into serialized data and transmitting it; wherein the ECC-encoded data includes frame alignment information (Step 208 in Figure 2 of Adam teaches that a synchronization frame alignment information sequence is added to scrambled data, hence the ECC-encoded data from FEC Encoder 106 in Figure 1 includes a synchronization frame alignment information sequence); and the system further comprises a receiver for receiving said serialized data and converting the serialized data into data frames based upon the frame alignment information (Deserializer 112, Frame Aligner 114, FEC Decoder 116 and 48B/50B Decoder in Figure 1 of Adam comprise a receiver for receiving said serialized data and converting the serialized data into data frames based upon the frame alignment information).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
  2. Ascertaining the differences between the prior art and the claims at issue.
  3. Resolving the level of ordinary skill in the pertinent art.
  4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
6. Claims 3, 4, 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Adam; Joel Fredric et al. (US 6628725 B1, hereafter referred to as Adam) in view of Kimmitt; Myles (US 6738935 B1).

35 U.S.C. 103(a) rejection of claims 3 and 9.

Figure 4 of Adam teaches a frame-recoverer for converting said serialized data into data frames (Deserializer 112 and Frame-Aligner 114 in Figure 1 of Adam comprise a frame-recoverer for converting said serialized data into data frames; see Step 402 in Figure 4 of Adam); an ECC decoder for converting said data frames into ECC-decoded data (FEC Decoder 116 in Figure 1 of Adam is an ECC decoder for converting said data frames into ECC-decoded data and error indications; see Step 404 in Figure 4 of

Art Unit: 2133

Adam); and a scrambler for converting said ECC-decoded data into de-scrambled data (48B/50B Decoder in Figure 1 of Adam comprises a scrambler for converting said ECC-decoded data from FEC Decoder 116 into de-scrambled data; see Step 408 in Figure 4 of Adam).

However Adam does not explicitly teach the specific use of error indications.

Kimmitt, in an analogous art, teaches use of error indications (Parity Check Logic 186 in Figure 8 of Kimmitt is an ECC decoder for converting said data frames into ECC-decoded data and error indications CE). Note: col. 17, lines 1-16 in Kimmitt teaches that error indications CE are used for frame alignment.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Adam with the teachings of Kimmitt by including use of error indications. This modification would have been obvious to one of ordinary skill in the art, at the time the invention was made, because one of ordinary skill in the art would have recognized that use of error indications would have provided the opportunity to synchronize frames during frame alignment (Note: col. 17, lines 1-16 in Kimmitt teaches that error indications CE are used for frame alignment).

35 U.S.C. 103(a) rejection of claims 4 and 10.

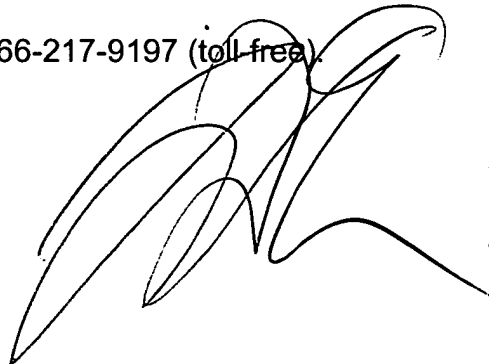
Adam and Kimmitt teach said frame-recoverer uses said error indications in converting said serialized data into data frames (Note: col. 17, lines 1-16 in Kimmitt teaches that error indications CE are used for frame alignment).

***Conclusion***

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph D. Torres whose telephone number is (571) 272-3829. The examiner can normally be reached on M-F 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert Decady can be reached on (571) 272-3819. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll free).

A handwritten signature in black ink, appearing to be 'J. D. Torres', with a large, stylized flourish at the end.

Joseph D. Torres, PhD  
Primary Examiner  
Art Unit 2133